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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,418	02/28/2002	Alexandra Louise Lowe	50223/USTN2/UST	4860

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EXAMINER

KATCHEVES, KONSTANTINA T

ART UNIT PAPER NUMBER

1636

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,418

Applicant(s)

LOWE ET AL

Examiner

Konstantina Katcheves

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-12 are pending in the present application.

Response to Arguments

Claims 1-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bedbrook et al. (WO 97/01952).

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dorer et al. (Cell Vol.77 pp993-1002 1994).

Applicant has failed to address the rejections under 35 U.S.C. 112, second paragraph. Thus, these claims stand rejected and Applicant is presumed to acquiesce to these rejections.

Applicant's arguments filed 20 December 2002 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

Claims 1-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bedbrook et al. (WO 97/01952). In response to Bedbrook et al., Applicant argues that figure 4 of Bedbrook et al. have been misinterpreted by the examiner. Applicant argues that figure 4 does not teach each and every element of the claimed invention.

Applicant should note that claims are given their broadest reasonable interpretation in light of the specification. By way of example claim 1, as originally, filed is very broad and is drawn to a gene silencing vector having: (a) an inverted repeat; and in more specific embodiments, the vector also comprises (b) a promoter region, (c) a 5' untranslated region, (d) a

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DNA sequence and (e) a 3' untranslated region containing a polyadenylation signal. The inverted repeat of the vector may be in the 5' untranslated region of the construct. These claims are very broad such each of these elements have been disclosed by Bedbrook et al.

Bedbrook et al. disclose a vector for inhibiting the expression of a target gene, ACC synthase, within an organism, tomato plant. See page 5, lines 5-17. The construct of Bedbrook et al. comprises a promoter region, p35S (see element (b) above), a 5' untranslated region (see element (c) above), leader sequence of the Cab22R gene, a transcribed DNA sequence (see element (d) above), a fragment of ACC synthase, and a 3' untranslated region, nos3 (see element (e) above). See Figure 4 and page 5, lines 24-33. The vector of Bedbrook et al. comprises three copies of the construct arranged as inverted repeats (see element (a) above). See page 6, lines 2-4. Three copies of the construct would encompass three copies of the 5' untranslated region.

Applicant's arguments are noted however the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Given that Bedbrook et al. teach each and every element of the claimed invention, the claims as originally filed are anticipated by the art of record.

Claim Rejections - 35 USC § 103

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dorer et al. (Cell Vol.77 pp993-1002 1994). With regard to the rejection under 35 USC 103(a) in view of Dorer et al., Applicant argues that the examiner has misinterpreted Dorer et al. Applicant

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should note that the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

It is unclear to the examiner what elements of the instant invention Applicant asserts that Dorer fails to teach. Applicant apparently agrees that figure 3 shows inverted repeats, but also appears to assert that the arrows in the diagram may indicate orientation of the reading frame. Therefore, this argument is not found persuasive.

Dorer et al. teach a vector for inhibition of a target gene, *mini-white*, (i.e. a gene silencing vector) comprising P transposon end, a β -galactosidase gene, plasmid sequences and the *mini-white* gene including the 5' and 3' untranslated regions (see elements . See Figure 1. Dorer et al. show that when this vector is integrated into the genome of a transgenic *Drosophila* as an inverted repeat the expression of the endogenous *mini-white* gene is silenced. See Figure 3. One of ordinary skilled in the art would have been motivated to make and use a modified vector of Figure 1 which includes the inverted repeats of Figure 3 for gene silencing because Dorer et al. teach that inverted duplication lead to overall repression of the *mini-white* gene. See page 999, first column, third paragraph. It is the examiner's position that Dorer et al. teach each and every element of the claimed invention and that modification of a vector as in figure 1 to include inverted repeats which the caption of figure 3 indicates as a preferred orientation would have been obvious to one of ordinary skill in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Konstantina Katcheves whose telephone number is (571) 272-0768. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday 7:30 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Remy Yucel, Ph.D. can be reached on (571) 272-0781. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Konstantina Katcheves
Examiner
Art Unit 1636



JAMES KETTER
PRIMARY EXAMINER